(d) is an aqueous solution or slurry formed from a compound having in the molecule at least one halogenatable amido or imido nitrogen atom;

in proportions such that at least one said amido or imido nitrogen atom becomes substituted by a bromine or chlorine atom, thereby continuously or substantially continuously forming product which precipitates in the liquid phase of an aqueous reaction mixture during all or substantially all of the time said concurrent feeding is occurring, and such that the pH of said liquid phase is continuously or substantially continuously maintained in the range of about 5.5 to about 8.5 during all or substantially all of the time said concurrent feeding is occurring.

2. (Amended) A process of Claim 132 wherein said pH is in the range of about 6.5 to about 8.5, and wherein the brominating agent and/or chlorinating agent used is bromine, bromine chloride, or bromine and chlorine.

3. (Amended) A process of Claim 132 wherein at least said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom and said inorganic base are fed in the form of a single preformed aqueous solution or slurry.

4. (Amended) A process of Claim 132 wherein at least said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom is fed in the form of a separate preformed aqueous solution or slurry, and wherein at least said inorganic base is fed in the form of a separate preformed aqueous solution or slurry.

5. (Amended) A process of Claim 132 wherein when starting up said process, said feeding is initiated into a reactor containing (i) a solids-containing heel of a reaction mixture from a prior reaction in which the product to be formed had been formed, or (ii) a solids-free mother liquor of a reaction mixture from a prior reaction in which the product to be formed had been formed.

6. (Amended) A process of Claim 132 wherein said feeding is initially to a mixing device which produces an effluent stream formed from:

A) said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom and said inorganic base; or

B) (i) said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom and water, (ii) said inorganic base and water, or (iii) said brominating agent and/or chlorinating agent and water; or

C) said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom, said inorganic base, and water;

and wherein the effluent stream is fed into a reaction vessel containing a larger volume of the aqueous reaction mixture; wherein said stream is subjected to dilution in the aqueous reaction mixture before the temperature of said effluent stream exceeds about 90°C; and wherein the temperature of the aqueous reaction mixture is maintained in the range of about 0 to about 90°C during all or substantially all of the time said feeding is occurring.

9. (Amended) A process of Claim 132 wherein said aqueous reaction mixture is at one or more temperatures in the range of about 0 to about 90°C.

10. (Amended) A process of Claim 132 wherein said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom is a 5,5-dialkylhydantoin in which each alkyl group has, independently, up to about three carbon atoms; wherein said inorganic base is a basic salt or oxide of a water-soluble alkali metal or an alkaline earth metal; wherein the amount of such base is the stoichiometric quantity, or is substantially the stoichiometric quantity, theoretically required to deprotonate at least one nitrogen atom of said hydantoin; wherein said brominating agent and/or chlorinating agent is (i) bromine, (ii) chlorine, (iii) bromine chloride, (iv) an alkali metal bromide or aqueous solution thereof, or an alkaline earth metal bromide or aqueous solution thereof, and chlorine, or hypochlorite salt or aqueous hypochlorite solution in amounts sufficient to generate bromine *in situ*, or (v) a

combination of any two or more of (i), (ii), (iii), and (iv); wherein at least all or such portion of said brominating agent and/or chlorinating agent that is in the vapor state, if any, is fed subsurface to the liquid phase of the aqueous reaction mixture; wherein the temperature of the aqueous reaction mixture is continuously or substantially continuously in the range of from about 30 to about 90°C during all or substantially all of the time said feeding is occurring; and wherein the proportions of the feeds are such that the total amount of said brominating agent and/or chlorinating agent being fed to N-halogenate the 5,5-dialkylhydantoin being fed are such that there are in the range of about 3.8 to about 4.2 atoms of halogen per molecule of 5,5-dialkylhydantoin.

B3 contd

11. (Amended) A process of any of Claims 132, 2, or 9 wherein said process is conducted in a continuous mode in which, under steady state conditions, said feed(s) are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom being fed to the reaction mixture per minute is in the range of about 10 to about 100 liters per mole per minute.

Sub D4 contd

12. (Amended) A process of any of Claims 132, 2, or 9 wherein said process is conducted in batch mode in at least one reactor and wherein, until the volume of the reaction mixture reaches 50 percent of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom being fed to the reaction mixture per minute is in the range of about 10 to about 100 liters per mole per minute; and wherein, when the volume of the reaction mixture is 50 percent or more of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom being fed to the reaction mixture per minute is in the range of about 30 to about 60 liters per mole per minute.

Cancel Claim 13 and substitute therefor Claim 133 reading as follows:

133. (New) A process of Claim 132 wherein said aqueous reaction mixture is at one or more temperatures in the range of about 40 to about 60°C.

14. (Amended) A process of Claim 132 wherein said pH is in the range of about 6.5 to about 8.5.

18. (Amended) A process of Claim 132 wherein said aqueous reaction mixture is at one or more temperatures in the range of about 0 to about 90°C, and wherein if said brominating agent and/or chlorinating agent is in the form of a vapor, said vapor is fed subsurface to the liquid phase of the reaction mixture.

19. (Amended) A process of any of Claims 132, 14, 15, or 16 wherein said process is conducted in a continuous mode in which, under steady state conditions, said feed(s) are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said compound having in the molecule at least one halogenatable amido or imido nitrogen atom being fed to the reaction mixture per minute is in the range of about 10 to about 100 liters per mole per minute.

20. (Amended) A process of any of Claims 132, 14, 15, or 16 wherein said process is conducted in a batch mode in at least one reactor and wherein, until the volume of the reaction mixture reaches 50 percent of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said N-halogenatable compound being fed to the reaction mixture per minute is in the range of about 10 to about 100 liters per mole per minute; and wherein, when the volume of the reaction mixture is 50 percent or more of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of N-halogenatable compound being fed to the reaction mixture per minute is in the range of about 30 to about 60 liters per mole per minute.

21. (Amended) A process of Claim 132 wherein said pH is in the range of about 6.8 to about 7.2.

23. (Amended) A process of Claim 132 wherein the proportions of water, inorganic base, and said compound being fed are such that:

A) where the inorganic base has a monovalent cation, there are from about 0.5 to about 2.5 moles of halogenatable amido or imido nitrogen atoms and from about 0.5 to about 2.5 moles of the base, per liter of water; and

B) where the base has a divalent cation, there are about 0.5 to about 2.5 moles of halogenatable amido or imido nitrogen atoms and from about 0.25 to about 1.25 moles of the base, per liter of water.

24. (Amended) A process of Claim 132 wherein the proportions of water, inorganic base, and said compound being fed are such that:

A) where the inorganic base has a monovalent cation, there are from about 1.0 to about 1.5 moles of halogenatable amido or imido nitrogen atoms and from about 1.0 to about 1.5 moles of the base, per liter of water; and

B) where the base has a divalent cation, there are about 1.0 to about 1.5 moles of halogenatable amido or imido nitrogen atoms and from about 0.5 to about 0.75 moles of the base, per liter of water.

25. (Amended) A process of Claim 132 wherein the process is conducted in a batch mode.

27. (Amended) A process of Claim 132 wherein the process is conducted in a continuous mode; wherein the temperature of the aqueous reaction mixture is in the range of about 20 to about 90°C; and wherein said inorganic base and said compound having in the molecule at least one halogenatable amido or imido nitrogen atom are fed either as separate solutions or slurries in water or as a single solution or slurry in water.

28. (Amended) A process of Claim 27 wherein during steady-state operation, precipitate is continuously being formed that (1) has a purity of at least about 97%, and (2) is formed in a continuous or substantially continuous yield of at least about 85% based on the amount of the compound having at least one halogenatable amido or imido nitrogen atom being fed to the reactor.

29. (Amended) A process of Claim 132 wherein said compound having at least one amido or imido functional group in the molecule is a hydantoin in which each of the two substituents in the 5-position is, independently, a hydrogen atom or a hydrocarbyl group.

33. (Amended) A process of Claim 30 wherein said process is conducted in batch mode in at least one reactor and wherein, until the volume of the reaction mixture reaches 50 percent of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said compound having in the molecule at least one N-halogenatable amido or imido nitrogen atom being fed to the reaction mixture per minute is in the range of about 10 to about 100 liters per mole per minute; and wherein, when the volume of the reaction mixture is 50 percent or more of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said hydantoin being fed to the reaction mixture per minute is in the range of about 30 to about 60 liters per mole per minute.

35. (Amended) A process of Claim 132 wherein said compound having in the molecule at least one halogenatable amido or imido nitrogen atom is a 5,5-dialkylhydantoin in which each alkyl group has, independently, up to about six carbon atoms; wherein said inorganic base is a basic salt or oxide of an alkali metal or an alkaline earth metal; wherein the amount of such base is the stoichiometric quantity, or is substantially the stoichiometric quantity, theoretically required to deprotonate at least one nitrogen atom of said hydantoin; wherein said brominating agent and/or chlorinating agent is (i) bromine, (ii) chlorine, (iii)

bromine chloride, (iv) an alkali metal bromide or aqueous solution thereof, or an alkaline earth metal bromide or aqueous solution thereof, and chlorine, or hypochlorite salt or aqueous hypochlorite solution in amounts sufficient to generate bromine *in situ*, or (v) a combination of any two or more of (i), (ii), (iii), and (iv); wherein at least all or such portion of brominating agent and/or chlorinating agent that is in the vapor state, if any, is fed subsurface to the liquid phase of the aqueous reaction mixture; wherein the temperature of the aqueous reaction mixture is continuously or substantially continuously maintained in the range of from about 20 to about 80°C during all or substantially all of the time said feeding is occurring; and wherein said process is conducted in a continuous mode in which, under steady state conditions, the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said 5,5-dialkylhydantoin being fed to the reaction mixture per minute is in the range of about 30 to about 60 liters per mole per minute.

B/C Amdt

Sub B/C Cont

36. (Amended) A process of Claim 132 wherein said compound having in the molecule at least one halogenatable amido or imido nitrogen atom is a 5,5-dialkylhydantoin in which each alkyl group has, independently, up to about six carbon atoms; wherein said inorganic base is a basic salt or oxide of an alkali metal or an alkaline earth metal; wherein the amount of such base is the stoichiometric quantity, or is substantially the stoichiometric quantity, theoretically required to deprotonate at least one nitrogen atom of said hydantoin; wherein said brominating agent and/or chlorinating agent is (i) bromine, (ii) chlorine, (iii) bromine chloride, (iv) an alkali metal bromide or an alkaline earth metal bromide, and chlorine, a hypochlorite salt, or an aqueous hypochlorite solution in amounts sufficient to generate bromine *in situ*, or (v) a combination of any two or more of (i), (ii), (iii), and (iv); wherein at least all or such portion of said brominating agent and/or chlorinating agent that is in the vapor state, if any, is fed subsurface to the liquid phase of the aqueous reaction mixture; wherein the temperature of said aqueous reaction mixture is continuously or substantially continuously maintained in the range of from about 20 to about 80°C during all or substantially all of the time said feeding is occurring; wherein said process is conducted in

a batch mode in at least one reactor; wherein, until the volume of the reaction mixture reaches 50 percent of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said 5,5-dialkylhydantoin being fed to the reaction mixture per minute is in the range of about 20 to about 80 liters per mole per minute; and wherein, when the volume of the reaction mixture is 50 percent or more of the total volume of the reactor(s), the feeds to said reaction mixture are maintained such that the ratio of (i) the volume of said reaction mixture in liters to (ii) the moles of said 5,5-dialkylhydantoin being fed to the reaction mixture per minute is in the range of about 30 to about 60 liters per mole per minute.

B10 cont'd Sub D10 Cont'd

In the Specification:

Page 1, please replace the paragraph under the heading "REFERENCE TO OTHER APPLICATIONS" with the following paragraph:

B11

Commonly-owned copending Application No. 09/484,687, filed January 18, 2000, by us and one of our colleagues, describes and claims 1,3-dibromo-5,5-dimethylhydantoin particulate solids producible by the processes of this Application, such solids having unprecedented enhanced properties, and compacted articles made from such particulate solids without use of a binder. Commonly-owned copending Application No. 09/487,816, filed January 18, 2000, by one of us and one of our colleagues, relates in part to converting 1,3-dihalo-5,5-dimethylhydantoins into compacted articles using novel binders. Commonly-owned copending Application No. 09/484,938, filed January 18, 2000, by some of our colleagues, describes and claims methods for effecting efficacious microbiological control utilizing 1,3-dibromo-5,5-dimethylhydantoin in novel compacted or non-compacted forms. Commonly-owned copending Application No. 09/484,891, filed January 18, 2000, by one of our colleagues relates to the compacting of 1,3-dihalo-5,5-dimethylhydantoins other than 1,3-dibromo-5,5-dimethylhydantoin without use of binders, and to the novel compacted forms so produced. Commonly-owned copending Application No. 09/483,896, January 18, 2000, filed by one of us and one of our colleagues relates to the granulation of small average particle size

B1 cont'd

1,3-dibromo-5,5-dimethylhydantoin and also to the compaction of such granulated products to form larger-sized articles.

Please amend the second paragraph beginning at Page 30, line 14 through Page 31, line 2 to read as follows:

B12

Because this invention enables the direct production of 1,3-dibromo-5,5-dimethylhydantoin reaction products in which the recovered 1,3-dibromo-5,5-dimethylhydantoin particulate solids have an average particle size of at least 175 microns, several very substantial advances in the art are made possible. For example, it has been discovered that 1,3-dibromo-5,5-dimethylhydantoin particulate solids having average particle sizes above 175 microns:

a) are far easier to handle because of their much lower dusting tendencies;

b) have flow properties through pipes and conduits and from hoppers that are far superior;

c) could be pressure compacted into shape-retentive tablets without use of a binder and without breakage occurring, whereas samples of commercially-available 1,3-dibromo-5,5-dimethylhydantoin particulate solids from several different sources could not be converted into tablets in the same manner without breakage occurring.

These and related discoveries are described in detail in commonly-owned copending Application No. 09/484,687 referred to above.